

CY-1031 OLED Switch 96RGBx96 (1.10")



☆ DISPLAY SPECIFICATIONS

- Display Type: OLED
- Display Mode: Passive Matrix
- Display Color : 65,536 Colors (Maximum)
- Drive Duty: 1/96 Duty
- Number of Pixels : 96(RGB) x 96
- Pixel Size: 0.049 x 0.191 mm
- Pixel Pitch : 0.069 x 0.207 mm
- Active Area: 19.852 x 19.856 mm



★ SWITCH SPECIFICATIONS

- Function: Normally Open Contact
- Supply Voltage: 2.4~3.3V
- Insulation Resistance: 100M Ω at 100V
- Bounce Time: \leq 5ms
- Life: > 1 million operations
- Initial Contact Resist.: <200M Ω (25M Ω typical)
- Total Travel: 0.118" – 0.020"

☆ MECHANICAL DIMENSIONS

- Dimension: 32 x 32 x 22.3 mm (LxWxH)
- Window Size: 21.65 x 21.65 mm (LxW)
- Active Area: 19.852 x 19.8 mm



CY-1031 OLED Switch 96RGBx96 (1.10")

☆ PIN DEFINITION

Pin No.	Symbol	Type	Function
1	VDD	P	Power Supply for Core VDD This is a voltage supply pin. It must be connected to external source.
2	VSS	P	Ground for System This a ground pin. It must be connected to external source.
3	SW	I	Terminal of Switch. Normally Open.
4	SW	I	Terminal of Switch. Normally Open.
5	C80	I	Select the CPU Type Low: 80XX-Series MCU High: 68XX-Series MCU
6	PS	I	Select Parallel/Serial Interface Type Low: Serial Interface High: Parallel Interface
7	CS#	I	Chip Select This is the chip select input. The chip is enable for MCU communication only when CS# is pulled low.
8	RES#	I	Power Reset for Controller and Drive This is reset signal input. When the pin is low , initialization of the chip is executed.
9	D/C#	I	Data/ Command Control This pin is Data/Command control pin. When the pin is pulled high, the input at D0~D7 is treated as display data. When the pin is pulled low, the input at D0~D7 will be transferred to the command register.
10	WR# (R/W#)	I	Write or Read/Write Select When 80xx interface mode is selected, the pin will be the Write (WR#) input. When interfacing to a 68xx-series microprocessor, the pin will be used as Read/Write (R/W#) selection input. Pull this pin to "High" for read mode and pull it to "Low" for write mode.
11	RD#(E)	I	Read or Read/Write Enable When 80xx interface mode is selected, the pin will be the Read (RD#) input. When interfacing to a 68xx-series microprocessor, the pin will be used as the Enable (E) signal. Read/Write operation is initiated when this pin is pulled high and the CS# is pulled low.
12	NC	-	Reserved Pin

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★ PIN DEFINITION

13~20	DO~D7	I/O	Host Data Input /Output Bus These pins are 8-bit bi-directional data bus to be connected to the microprocessor's data bus. <table border="1" style="margin-top: 10px;"> <thead> <tr> <th>PS</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>D[0]SCL: Synchronous Clock Input D[1] SDI: Serial Data Input D[2] SDO: Serial Data Output D[3] R/W: Serial Read (High) / Write (Low)</td> </tr> <tr> <td>1</td> <td>8-bit Bus: D[7:0]</td> </tr> </tbody> </table> When using SPI, the unused pins must be connected to VSS.	PS	Description	0	D[0]SCL: Synchronous Clock Input D[1] SDI: Serial Data Input D[2] SDO: Serial Data Output D[3] R/W: Serial Read (High) / Write (Low)	1	8-bit Bus: D[7:0]
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1	8-bit Bus: D[7:0]								
21	VSS	P	Ground for System This a ground pin. It must be connected to external source.						
22	VCC-CTL	I	OLED Driver Power Supply ON/ OFF Control When this pin is pulled high, the panel power supply will be turned ON. When this pin is pulled low, the panel power supply will be turned OFF.						
23	NC	-	Reserved Pin						
24	VCC	P	OLED Driver Power Supply Output This pin is OLED driver power supply output. When VCC-CTL is pulled high, the pin will be output about 13V voltage.						

★ DC CHARACTERISTICS

Characteristics	Symbol	Conditions	Min	TYP	Max	Unit
Supply Voltage for Operation	VDD		2.4	2.8	3.3	V
Supply Voltage for Display	VCC_C	Note 1	12.5	13	13.5	V
High Level Input	VIH		0.8xVDD	-	VDD	V
Low Level Input	VIL		0	-	0.4	V
High Level Output	VOH	IOH = -0.1mA	VDD-0.4	-		V
Low Level Output	VOL	IOL = -0.1mA		-	0.4	V
Operating Current for VDD	IDD		-	2.5	3.5	mA
Operating Current for Vcc_c	ICC	Note 2 Note 3	-	12.1 20.2	15.2 25.3	mA mA

Note 1: Brightness (L_{br}) and Supply Voltage for Display (V_{cc_c}) are subject to the change of the panel characteristics and the customer's request.

Note 2: $V_{DD}=2.8V$, $V_{cc_c}=13V$, 50% Display Area Turn on.

Note 3: $V_{DD}=2.8V$, $V_{cc_c}=13V$, 100% Display Area Turn on.